

ABSTRACT

A gas leak detection device for a fuel cell system equipped with a main valve (SV1) in a fuel gas supply source (11), comprising a shutdown valve (SV2) provided 5 in a fuel gas supply channel downstream of the main valve (SV1), pressure monitoring devices (p1, p2, 20) for monitoring a pressure in the fuel gas supply channel between the main valve and the shutdown valve, a depressurization treatment devices (10, 15, SV5) for depressurizing the inside of the fuel gas supply channel, and a determination device (20) for monitoring a variation of pressure in a 10 sealed space of the fuel gas supply channel formed between the main valve and the shutdown valve after the main valve and the shutdown valve have been closed and determining the operation state of the main valve based on the variation of pressure in the sealed space. In the depressurization treatment, the fuel gas supply channel is depressurized until the pressure enters a pressure range in which the pressure can 15 be monitored in the pressure monitoring device.